

*DALCIN CUMMINS ASSOCIATES*

**PRELIMINARY ENGINEERING COST ANALYSIS
FOR
MC DONNELL DOUGLAS PORTION
OF
HARBOR GATEWAY MASTER PLAN**

PREPARED FOR:

**GASCON MAR LTD.
2050 W. 190TH STREET, STE. 201
TORRANCE, CA 90504**

OCTOBER 13, 1995

*DALCIN CUMMINS ASSOCIATES*

October 13, 1995

Gascon Mar Ltd.
2050 W. 190th Street, Ste. 201
Torrance, CA 90504

Attn: Mr. Allan MacKenzie

Re: McDonnell Douglas Preliminary Engineering Cost Analysis

Dear Mr. MacKenzie:

The following is a summary of our findings regarding a preliminary engineering cost analysis for the McDonnell Douglas portion of the Harbor Gateway Master Plan. This analysis is based on information supplied to us by your company, conceptual drawings from PBR, interviews with various public and private agencies, and previous knowledge of the area.

Please note that many essential reports and investigations such as the soils report, preliminary title report, site topography, etc. are not available at this time. This, of course, limits the overall accuracy of the cost analysis; however, it is our understanding that is not the purpose of this report. The true intent of the investigation at this time is to discover the major development requirements and assign "ball park" costs to these improvements.

We have attempted to include as many "hidden" costs as possible but, as you know, on a project of this size, many items will have to be negotiated with various agencies during the entitlement process.

INTRODUCTION

This preliminary engineering cost study has been performed to obtain a general understanding of the project site and proposed industrial/commercial development, and to determine engineering related constraints. This study was based upon City and County records, brief discussions with various Departments of the City of Los Angeles and other Public Utility Agencies. A site plan prepared by PBR was used as a basis for determining costs associated with the proposed development infrastructure. Only that portion of the project owned by McDonnell Douglas is being considered in this report.

Gascon Mar Ltd.
October 13, 1995
Page Two

Due to the preliminary nature of this study, many factors are still unknown and could significantly impact the project development schedule and costs. These items cannot be known until the planning stage has been completed with an approved environmental impact report, traffic study and specific plan. This study addresses fundamental development items which can be anticipated with a typical development of this nature.

DRAINAGE & GRADING

The site as it exists is relatively flat with a difference in elevation of approximately five feet from the lowest point of the site at the northeast to the highest portion of the site at the southwest.

The site currently drains to the east and north through onsite drainage systems. Construction documents for the onsite facilities were not available for review at this writing.

It is assumed that all of the site drainage is directed to the northeast corner of the site and into an existing 66 inch pipe which runs under Normandie Avenue and connects to a 75 inch pipe constructed as part of Los Angeles County Flood Control District Project No. 3894. County records reveal that this drainage system is deficient and flows to this system will have to be reduced accordingly. Rough preliminary estimates indicate that the system will accept approximately 130 cfs from the study site. Flows on the order of 300 cfs can be anticipated from the developed site and, consequently, onsite storage of runoff will be required. Due to land use issues, it will probably be most effective to store this excess runoff in an underground storage facility located in a proposed parking area.

An underground storm drain system is anticipated with a main line running along the Southern Pacific Railroad (S.P.R.R.) right-of-way and then branching out to accept flows from various areas of the site (see plan attached).

A recent site topography and soils report are unavailable at this time, therefore, grading quantities cannot be accurately calculated. An assumption of two feet of grading over the existing site was used to estimate grading quantities. No information is available on soil composition underlying the site and it is assumed that no remedial measures (overexcavation and recompaction) are required. Also, it is assumed that there is no soil contamination or bioremediation required.

Gascon Mar Ltd.
October 13, 1995
Page Three

SEWER

The area is served by the Los Angeles County Sanitation District No. 5 which has a 57 inch trunk sewer along the S.P.R.R. right-of-way. According to the County, there are no deficiencies in the system.

Two sewer mains are proposed to serve the site as shown on the attached plan. Adequate depth is available for service to all lots.

WATER

The site is currently served by the Dominguez Water Company through a 20 inch main along the southerly property line.

The proposed water system is to be constructed within the newly created streets and looped to the existing mains in Western Avenue, 190th Street and Normandic Avenue as shown on the attached plan. At this time, it is not known whether Dominguez Water Company or the City of Los Angeles Department of Water and Power will serve the site, although it appears to be in Dominguez Water Company's district.

The main lines used for the interconnecting system are 12" diameter ductile iron pipe. Fire hydrants are spaced at approximately 300 feet on all streets.

ELECTRICAL, TELEPHONE & GAS

Electrical service is available to the site from the existing substation located at the southerly end of the property. The service company is Los Angeles City Department of Water and Power. Lots will be served through an underground system in the streets. The Developer is responsible for trenching, conduits and vaults for their system.

Telephone service is available from several locations on the surrounding streets. The service company is Pacific Bell. Lots will be served through an underground system in the streets. The Developer is responsible for trenching conduits and vaults for their system.

Gas service is available from Southern California Gas Company. They will be responsible for design and installation of their supply system in the streets.

Gascon Mar Ltd.
October 13, 1995
Page Four

STREET IMPROVEMENTS

The street pattern as shown is taken directly from the preliminary site study conducted by PBR. The main collector streets will require an 80 foot right-of-way with the cul-de-sacs requiring a 60 foot right-of-way.

The pavement and base sections for public streets in this area are substantially more than average, which indicates poor soil conditions. A very heavy section of 4" A.C. pavement on 22" crushed aggregate base was used for interior streets.

Street lights are placed at 60 foot intervals on staggered sides of the street. Street trees are placed at 40 foot intervals for both sides of all streets.

Concrete curb and gutter with five foot wide sidewalks is used throughout the development. Driveway cuts were not included for this report.

Del Amo Boulevard street improvements are not included with this report and are being done as a separate item.

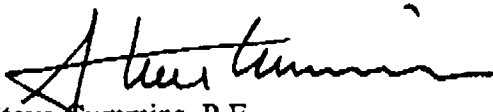
As a result of the initial traffic study conducted by WPA Traffic Engineering, Inc., certain offsite improvements are anticipated and are listed in the cost estimate table.

Please see the attached sheets outlining the major development requirements and preliminary cost estimate.

If you have any questions or require further information, please contact the undersigned.

Sincerely,

DALCIN CUMMINS ASSOCIATES



Steve Cummins, P.E.
Executive Vice President

SC/dh
JN: 86000
Attachments

PRELIMINARY COST ESTIMATE

	<u>TASK</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
1.	Engineering		
	A. Rough estimate of 15% of total construction cost (Los Angeles City)	1,400,000.00	
	Subtotal Engineering		1,400,000.00
2.	Grading	2,000,000.00	
	Earthwork - 500,000 C.Y. @ \$4.00/C.Y.		
	Subtotal Grading		2,000,000.00
3.	Sewer		
	A. L.A. County Connection Charges	250,000.00	
	B. Sewer Pipe - 6,000 L.F. @ \$40/L.F.	240,000.00	
	C. Manholes - 24 @ \$3,000/Each	72,000.00	
	Subtotal Sewer		562,000.00
4.	Water		
	A. Water Main - 12,000 L.F. @ \$100/L.F.	1,200,000.00	
	B. Hydrants - 30 @ \$3,000/Each	90,000.00	
	C. Connections to Mains - 4 @ \$5,000/Each	20,000.00	
	D. Utility Tax (32%)	419,000.00	
	Subtotal Water		1,729,000.00
5.	Storm Drain		
	A. Storm Drain Line - 6,200 L.F. @ \$100/L.F.	620,000.00	
	B. Manholes - 20 @ \$3,000/Each	60,000.00	
	C. Catch Basins - 15 @ \$3,000/Each	45,000.00	
	D. Storm Water Detention Facility	300,000.00	
	Subtotal Storm Drain		1,025,000.00

6.	Street Improvements		
A.	80' Right-of-Way Streets - 6,080 L.F. @ \$280/L.F.	1,702,000.00	
B.	60' Right-of-Way Streets - 1,300 L.F. @ \$210/L.F.	273,000.00	
C.	Improvements along Normandie - 3,100 L.F. @ \$100/L.F.	310,000.00	
D.	Potential Signalized Intersections (see map)	520,000.00	
E.	Potential Intersection Improvements (see map)	400,000.00	
F.	Potential Railroad Crossing (see map)	100,000.00	
	Subtotal Street Improvements		3,305,000.00
7.	Utilities		
A.	Electrical Telephone, Cable TV - Service Lines	500,000.00	
B.	Utility Tax (32%)	160,000.00	
	Subtotal Utilities		660,000.00
8.	Perimeter Wall (6') 7,900 L.F. @ \$25/L.F.	197,500.00	
	Subtotal Utilities		197,500.00
9.	Miscellaneous Offsites 10% of Construction Cost	928,000.00	
	Subtotal Miscellaneous Offsites		928,000.00
10.	Fees, Permits, Soils Engineer Inspection, Blueprinting, Etc. - 10% of Construction Cost	928,000.00	
	Subtotal		928,000.00

10/13/95-JK/SC

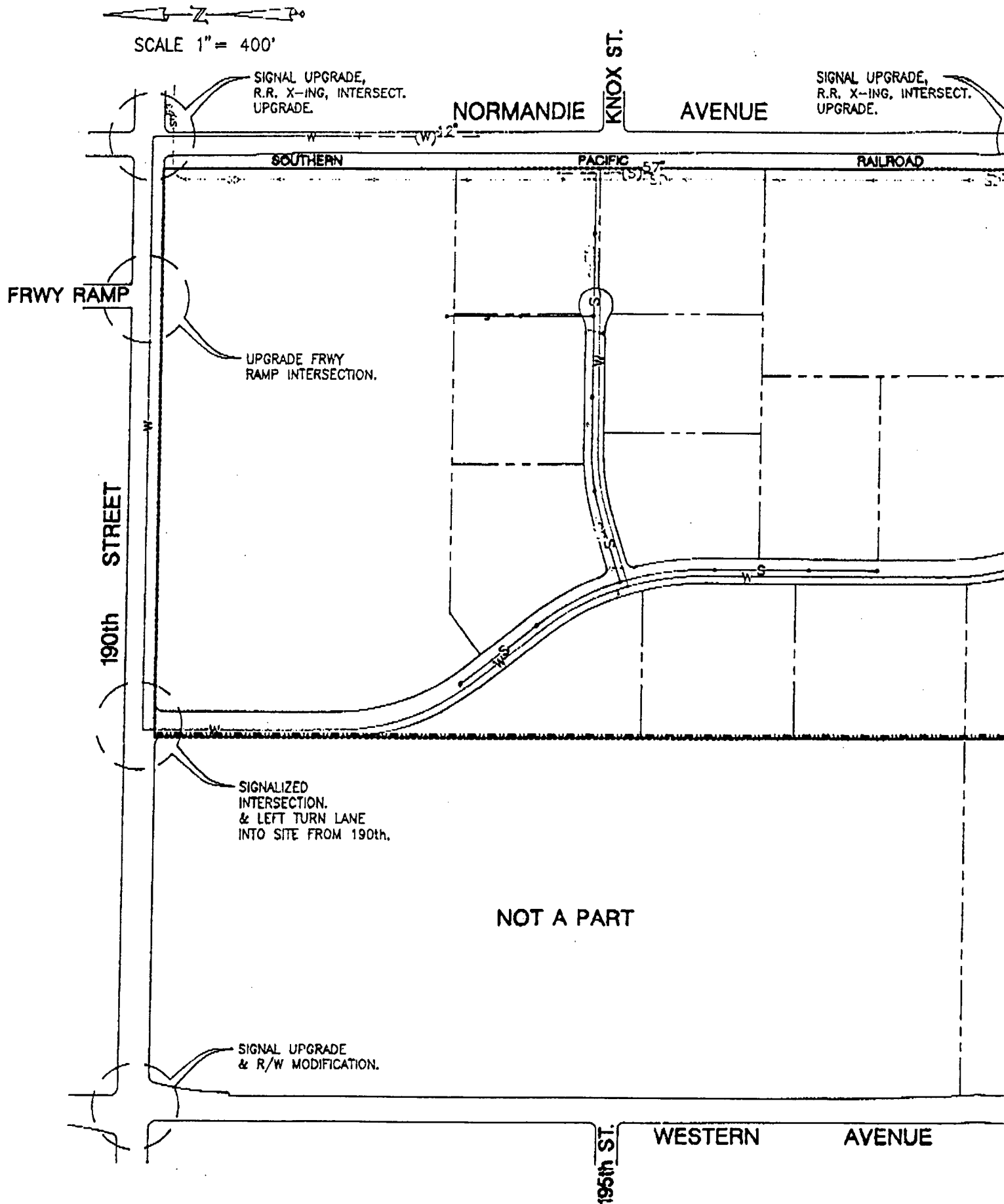
PRELIMINARY COST ESTIMATE SUMMARY

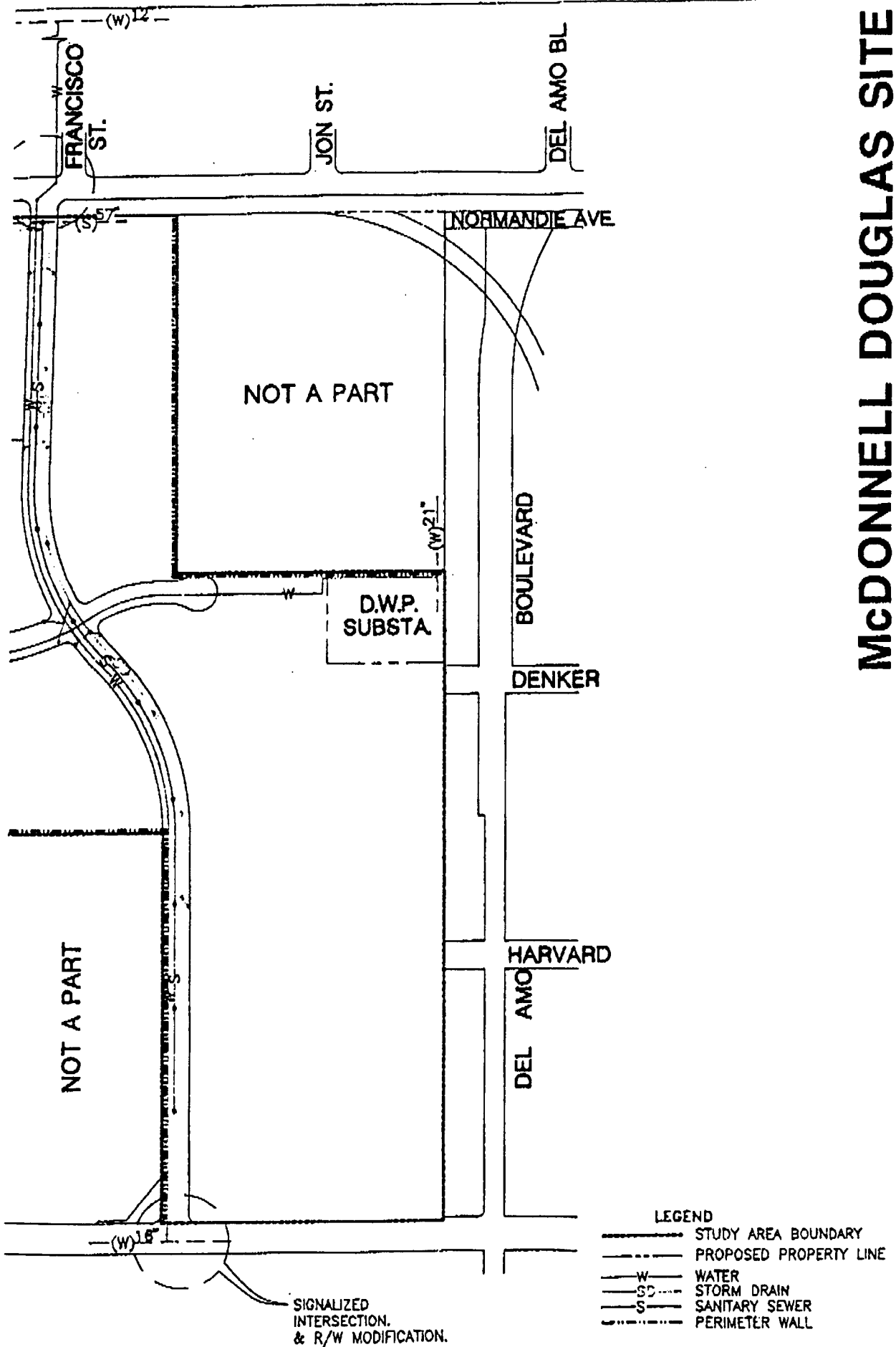
<i>DESCRIPTION</i>	<i>AMOUNT</i>
1. Engineering	1,400,000.00
2. Grading*	2,000,000.00
3. Sewer	562,000.00
4. Water	1,729,000.00
5. Storm Drain	1,025,000.00
6. Street Improvements	3,305,000.00
7. Utilities	660,000.00
8. Perimeter Wall	198,000.00
9. Miscellaneous Offsites (10%)	928,000.00
10. Fees, Permits, Etc. (10%)	928,000.00
+20% Contingency (\$12,735,000)	2,547,000.00
TOTAL	15,282,000.00

*Grading costs assume that no remedial measures are required.

10/13/95-JK/SC

ATTACHMENTS





MCDONNELL DOUGLAS SITE

HARBOR GATEWAY ENGINEERING STUDY

10/13/95

Dalcin Cummins
Associates

